

CONFIDENTIAL

File 605  
T.O. 6

The Files - Contract 605

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Telacon Report - Bimonthly Progress, [REDACTED]

1. On 26 October 1959, a call was made to [REDACTED] of [REDACTED] to monitor progress on Contract 605. The only work left on tasks 1 and 4 (inflatable parabolics and breakdown dish antennas) is the submission of residual inventory by [REDACTED]. They are in the process of shipping this now.

2. Task Order 6, the 30 to 1,000 mc antenna system project, is progressing well. Gain of the finished model will be about 8 db/ isotropic with SWR less than 2:1. There is a good chance that this task can be terminated early, according to [REDACTED] due to the good luck they are having in the design of this antenna system.

3. Task Order 8, antenna filter detector system, is also progressing well. The design of the K band antennas is finalized and parts are being ordered. Crystal mixers are now at [REDACTED] but work there is stopped until a VA-9 is obtained for evaluation of the mixers. The 500 to 10,000 mc antenna will be very similar to LP antennas which have been built in the past, with very little R+D left to do here. [REDACTED] has some ideas as to reducing the size of the 50 to 500 mc body worn antenna system but he did not want to talk about them over the phone. He is not sure that they will work as he envisions but in any event he stated that they would have no trouble designing a suitable system. The majority of the work is going into R+D of the filters. Because of the steep selectivity characteristics which we wanted, the resultant equation for the filters is a 14th order polynomial. An IBM 650 computer is being used to design the filters at present.

4. [REDACTED] stated that they will shortly announce a vertically polarized antenna array covering 4 to 30 mc whose longest element is  $\frac{1}{2}$  wavelength at the lowest frequency. Work on slot antennas is progressing slowly because of lack of time and difficulties in controlling the individual element current distribution. [REDACTED] stated that they were having no difficulty feeding slot antenna structures.

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